

REMARKS

Applicants have added limitations to the independent claims. As discussed below, these changes are based on edge node and Network Operations Center (NOC) characteristics described in Applicants' specification. None of the prior art teaches these limitations in an edge node.

In particular, claim 1 now includes a controller "connected with the receiving router to form a private Virtual Local Area Network (VLAN), to respond to requests from an Internet Redirection Engine (IRE), the IRE for directing content requested by an end user to the edge node, to process incoming data packages, and to execute commands from the NOC." Claims 6 – 8 also include this functionality in the new limitations.

Pages 46 – 50 of Applicants' specification describe the interactions between an Internet Redirection Engine (IRE) and the edge node. A key innovation of the claimed edge node not previously presented in the claims is its ability to interact closely with the IRE. The IRE, located at the NOC or at another location other than the edge node in the content distribution system, takes a request for content from an end user and assigns an edge node to serve the requested content to the end user. To make the edge node assignment decision, the IRE gathers information regarding content files stored at the various edge nodes in the network as well as requesting edge nodes to run Unix "traceroute" commands to determine the number of network hops between the respective edge nodes and certain user IP addresses (see page 47 of Applicants' specification). Furthermore, the IRE may also determine which specific media server of

a possible plurality of media servers at the edge node should answer the user's content request (page 49 of Applicants' specification).

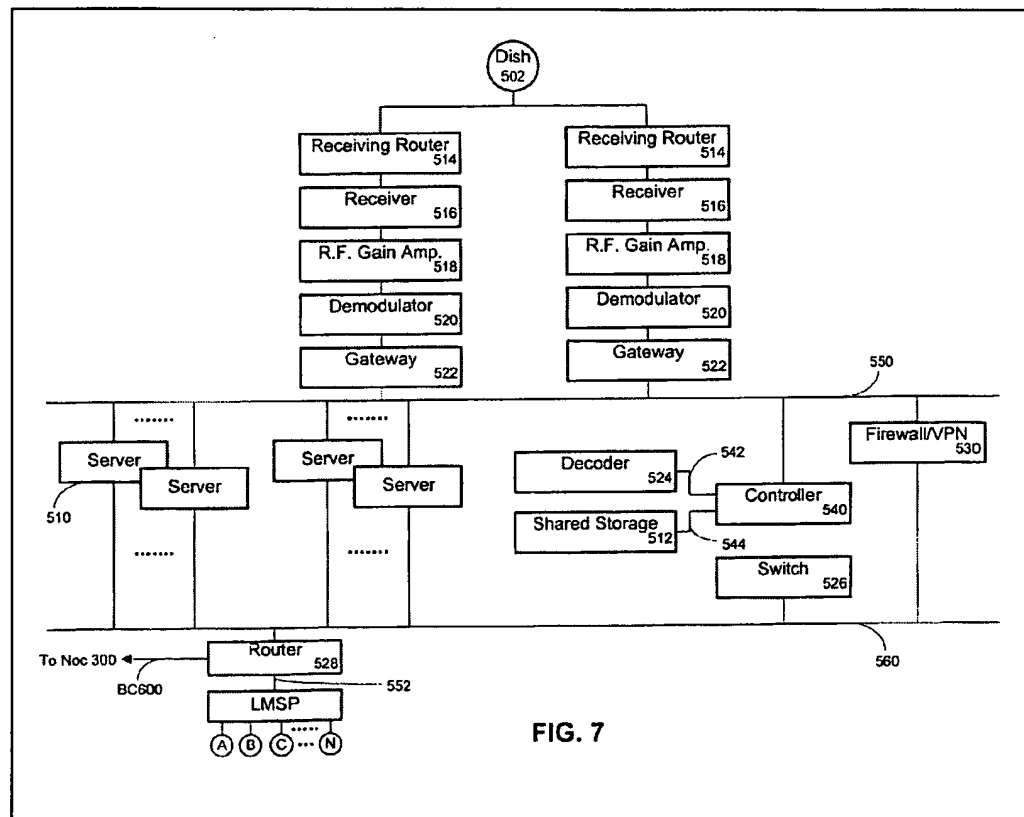
To enable these operations, the edge node's controller is configured to work closely with the IRE by responding to the IRE's requests and supplying the data needed for edge node assignments. As stated on page 29 of Applicants' specification, "A discrete controller 540 is used for the operation of EN 500 as shown in Figure 7."

Further details are found on page 31 of Applicants' specification:

"Controller 540 runs software called a 'data manager.' The data manager positions non-live multimedia content on EN [edge node] 500 and executes commands received from the NOC. The data manager also allows for controlling the operation of EN 500 remotely by sending and receiving command information from NOC 300. The data manager is responsible for storing and processing packages received at controller 540 of EN 500. The data manager may also perform updates of software on EN 500, uploads log to NOC 300 reporting the control status of NOC 300, and updates the EN's registry entries."

The amended claim 1 also now includes further specificity on the nature of the private and public VLANs in Applicants' edge node. The value of this split private and public VLAN configuration was stated in Applicants' Response of March 29, 2005 and bears repeating here. The security of a private VLAN receiving the streaming content assures content providers that there can be no unauthorized access to the receiver, even through the public VLAN because they are separated by the media server. At the same time, the public VLAN provides a means for distributing the content to users in a way that can be configured and controlled remotely with ease. The added limitations that describe which elements in the edge node comprise each VLAN further distinguish Applicants' VLANs from the prior art cited by the Examiner, most notably Specht (U.S. Patent No. 6,414,958).

Support for this configuration can be found in Applicants' Figure 7 reproduced below.

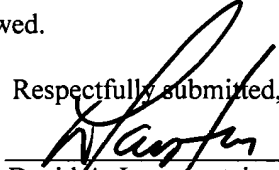


Lastly, claims 1 6, 7, and 8 now include a “terrestrial back channel” for communicating with the NOC, that does not appear in the cited prior art Rodriguez (U.S. Application Publication No. 2002/0059623) nor in other prior art. The back channel is shown in Applicants' Figure 7 above as BC600. Although discussed throughout Applicants' specification, the functionality of BC 600 is summarized on page 11 as follows: “BC 600 is a secondary land-based communication link for a back up between

and NOC 300 and EN 500. BC 600 may be used for remote control of EN 500 by sending control messages from NOC 300 or sending control signals from EN 500 to NOC 300.”

With the addition of these new claim limitations, Applicants believe that the claims are now in a condition to be allowed.

Respectfully submitted,



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